

Contents

Volume 215 (1989)

Research Papers

- The interaction between X-rays and transposon mobility in *Drosophila*: Hybrid sterility and chromosome loss
L. Margulies, C.S. Griffith, J.C. Dooley and S.S. Wallace (U.S.A.) 1
- DNA topoisomerases and models of sister-chromatid exchange
L.E. Dillehay, D. Jacobson-Kram and J.R. Williams (U.S.A.) 15
- The effect of agent dose and treatment time on the intercellular distribution of sister-chromatid exchanges induced by genotoxic agents in mouse bone marrow cells in vivo
R.R. Tice, B.G. Ormiston and A.F. McFee (U.S.A.) 25
- Classical and molecular genetic analyses of *his-3* mutants of *Neurospora crassa*. II. Southern blot analyses and molecular mechanisms of mutagenicity
J.S. Dubins, L.K. Overton, R.R. Cobb and F.J. De Serres (U.S.A.) 39
- Induction of the SOS response in *Escherichia coli* by heavy ions
S. Kozubek, E.A. Krasavin, I. Soska, V. Drasil, K.G. Amirtayev, B. Tokarova and M. Bonev (U.S.S.R., Czechoslovakia) 49
- Changes in DNA methyltransferase induced by treatment with *N*-2-acetylaminofluorene
L.M. Bravo and C.E. Salas (Chile, Brasil) 55
- Flow-cytometric cell-cycle analysis of Chinese hamster cells following exposure to cytotoxicants
G. Fertig and H.G. Miltenburger (F.R.G.) 61
- Sister-chromatid exchanges (SCEs), cell survival and mutation in HeLa S3 cells with different sensitivity to alkylating agents; evidence that SCE induction and cell survival or mutation induction are dissociable
R. Ishida, K.R. Utsumi and T. Takahashi (Japan) 69
- Comparison of the nucleotide sequences of a yeast gene family. I. Distribution and spectrum of spontaneous base substitutions
S. Hohmann and D. Gozalbo (F.R.G.) 79
- Comparison of the nucleotide sequences of a yeast gene family. II. Analysis of spontaneous deletions and insertions
D. Gozalbo and S. Hohmann (F.R.G.) 89
- Nucleophilic selectivity as a determinant of carcinogenic potency (TD₅₀) in rodents: a comparison of mono- and bi-functional alkylating agents and vinyl chloride metabolites
A. Barbin and H. Bartsch (France) 95
- Exposure level monitor of a carcinogenic glutamic acid pyrolysis product in rabbits
Y. Yin, O. Wada and S. Manabe (Japan) 107
- Role of *ruvAB* genes in UV- and γ -radiation and chemical mutagenesis in *Escherichia coli*
N.J. Sargentini and K.C. Smith (U.S.A.) 115
- Hydrolysis of *N*³-methyl-2'-deoxycytidine: Model compound for reactivity of protonated cytosine residues in DNA
L.C. Sowers, W.D. Sedwick and B.R. Shaw (U.S.A.) 131
- Scoring of SCE frequency per cell cycle in CHO chromosomes by means of a standardized 3-way-differential staining method
P. Escalza, J. Piñero and F. Cortés (Spain) 139
- Molecular analyses of in vivo *hprt* mutations in human T-lymphocytes. III. Longitudinal study of *hprt* gene structural alterations and T-cell clonal origins
J.A. Nicklas, T.C. Hunter, J.P. O'Neill and R.J. Albertini (U.S.A.) 147
- Mutations by near-ultraviolet radiation in *Escherichia coli* strains lacking superoxide dismutase
J. Hoerter, A. Eisenstark and D. Touati (U.S.A., France) 161
- Investigation of the relationships between plasma levels of ascorbate, vitamin E and β -carotene and the frequency of sister-chromatid exchanges and release of reactive oxidants by blood leucocytes from cigarette smokers
C.E.J. Van Rensburg, A. Theron, G.A. Richards, C.A. Van der Merwe and R. Anderson (R.S.A.) 167
- Mutagenicity of ptaquiloside, the carcinogen in bracken, and its related illudane-type sesquiterpenes. I. Mutagenicity in *Salmonella typhimurium*
T. Nagao, K. Saito, E. Hirayama, K. Uchikoshi, K. Koyama, S. Natori, N. Morisaki, S. Iwasaki and T. Matsushima (Japan) 173

Mutagenicity of ptaquiloside, the carcinogen in bracken, and its related illudane-type sesquiterpenes. II. Chromosomal aberration tests with cultured mammalian cells	
A. Matsuoka, A. Hirose, S. Natori, S. Iwasaki, T. Sofuni and M. Ishidate, Jr. (Japan)	179
A comparative study on ethanol and acetaldehyde as inducers of chromosome malsegregation in <i>Aspergillus nidulans</i>	
R. Crebelli, G. Conti, L. Conti and A. Carere (Italy)	187
Mechanisms for recombination between stably integrated vector sequences in CHO cells	
D. Hellgren and B. Lambert (Sweden)	197
DNA-DNA dot hybridization technique used as DNA determination method in the alkaline elution analysis of DNA damage	
T. Müller, S. Achten, R.-A. Walk and W. Doerfler (F.R.G.)	205
'Petite' mutagenesis and mitotic crossing-over in yeast by DNA-targeted alkylating agents	
L.R. Ferguson, P.M. Turner, T.A. Gourdie, K.K. Valu and W.A. Denny (New Zealand)	213
Reactive oxygen-mediated damage to murine mammary tumor cells	
L.A. Paul, A.M. Fulton and G.H. Heppner (U.S.A.)	223
<i>Letter to the Editor</i>	
M.D. Shelby and L.R. Boone (U.S.A.)	235
<i>Contents, Vol. 215 (1989)</i>	237

